CCORP Data Specifications for In-House Tool Developers

Version 1.2

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The program's Clinical Advisory Panel, as required by statute, adopted 51data elements to be collected to produce risk-adjusted outcome reports. The field titles and their values are indicated on these 2-pages, as well as whether each is a STS, modified STS, or non-STS data element.

2. CCORP Data Element Specifications (STS, Non-STS and Modified STS) **Pgs 3-17**
This section lists the data elements specifications for the program, including their field name, short name, value, format, length, and definition. Data element definitions/response categories for some 'STS' data elements may differ from V. 2.41 data specifications found on the National STS website and we recommend you use the response categories identified in this document. Data elements with parent child relationships or numeric data ranges may include soft or hard edits. For STS data elements, the field name will match STS, but CCORP's name will be in parenthesis if the names vary drastically.

3. CCORP Data Fields Export Order for Submissions to OSHPD **Pgs 18-19**
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The CCORP regulations require that each surgeon certify the data reported for his or her cases in a submitted report. Certifications must accompany the scheduled data submissions. A copy of the surgeon certification form is included. In addition, we recommend that surgeon summary reports, listing descriptive statistics for all isolated CABG cases be provided to surgeons, along with individual patient reports for these cases. A preliminary version of the surgeon summary report is provided as a pdf attachment.

1. CCORP Data Elements

California CABG Outcomes Reporting Program (CCORP):
Data Elements Adopted by the CABG Clinical Advisory Panel, 5/7/02

IDENTIFICATION AND CLASSIFICATION	
Facility Identification Number	STS (Modified)
Isolated CABG: Yes; No	Non-STS
Responsible Surgeon Name (3 separate fields): Surgeon Last Name; Surgeon First Name; Surgeon Middle Initial	STS (Modified)
Responsible Surgeon CA License Number	Non-STS
Medical Record Number	STS
Date of Birth: mm/dd/yyyy	STS
Date of Surgery: mm/dd/yyyy	STS
Date of Discharge: mm/dd/yyyy	STS
Discharge Status: Alive; Dead	STS
Date of Death: mm/dd/yyyy	STS
RISK FACTOR: DEMOGRAPHIC	
Race: Caucasian; Black; Hispanic; Asian; Native American; Other	STS
Gender: Male; Female	STS
Patient Age: Calculated	STS
Height (cm)	STS
Weight (kg)	STS
RISK FACTOR: OPERATIVE	
Status of the Procedure: Emergent/Salvage; Emergent; Urgent; Elective	STS
RISK FACTOR: COMORBIDITY/OTHER	
Last Creatinine Level Preop (mg/dl)	STS
Dialysis: Yes; No	STS
Diabetes: Yes; No	STS
Peripheral Vascular Disease: Yes; No	STS
Cerebrovascular Disease: Yes; No	STS
Cerebrovascular Accident: Yes; No	STS
Cerebrovascular Accident Timing: <=2 weeks; >2 weeks	STS
Chronic Lung Disease: No; Mild; Moderate; Severe	STS
Hypertension: Yes; No	STS
Immunosuppressive Treatment: Yes; No	STS
Hepatic Failure: Yes; No	Non-STS
RISK FACTOR: CARDIAC	
Arrhythmia: Yes; No	STS
Arrhythmia Type: Sustained VT/VF; Heart Block; Afib/flutter	STS
Myocardial Infarction: Yes; No	STS
Myocardial Infarction Timing: <=6 hours; >6 hours but <24 hours; 1 to 7 days; 8 to 21 days; >21 days	STS
Cardiogenic Shock: Yes; No	STS
Angina: Yes; No	STS
Angina Type: stable; unstable	STS
CCS Classification: No Angina = Class 0; Class I; Class II; Class III; Class IV	STS
Congestive Heart Failure: Yes; No	STS
NYHA Classification: Class I; Class II; Class III; Class IV	STS

RISK FACTOR: PREVIOUS INTERVENTIONS	
Number of Prior Cardiac Operations Requiring Cardiopulmonary Bypass	STS
Number of Prior Cardiac Operations Without Cardiopulmonary Bypass	STS
Prior PCI: Yes; No	STS (Modified)
Interval from Prior PCI to Surgery: <=6 hours; > 6 hours	STS (Modified)
RISK FACTOR: HEMODYNAMIC STATUS	
Ejection Fraction (%)	STS
Ejection Fraction Method: LV Gram; Radionuclide; Estimate; ECHO	STS
Left Main Disease (% Stenosis)	STS (Modified)
Number of Diseased Coronary Vessels: None; One; Two; Three	STS
Mitral Insufficiency: None; Trivial; Mild; Moderate; Severe	STS
PROCESS OF CARE	
Internal Mammary Artery(ies) Used as Grafts: Left IMA; Right IMA; Both IMAs; No IMA	STS
Cardiopulmonary Bypass Used: Yes; No	STS
Conversion to Cardiopulmonary Bypass: Yes; No	STS
Primary Incision Full Sternotomy; Partial Sternotomy; Transverse Sternotomy; Right Vertical Parasternal; Left Vertical Parasternal; Right Anterior Thoracotomy; Left Anterior Thoracotomy; Posterolateral Thoracotomy; Xiphoid; Epigastric; Subcostal	STS
Cardioplegia: Yes; No	STS

2. CCORP Data Element Specifications for In-House Tool Developers

Overall Data Value Requirements

A valid value must be submitted for the following data elements for each case (i.e., missing or blank data are not allowed):

- Facility Identification Number
- Medical Record Number
- Responsible Surgeon Name
- Responsible Surgeon California License Number
- Isolated CABG
- Date of Surgery
- Date of Discharge
- Discharge Status

If a value for a data element NOT listed above is unknown, not applicable, or otherwise missing, a hospital may submit the record without a value. However, CCORP may ask a hospital to provide data to replace missing values after a hospital report has been accepted by CCORP.

DATA ELEMENTS

- Please note that the value specifications for these data elements are fixed and no "re-coding" of values (e.g. changing 'Yes' to '1') will be allowed.
- STS Field Names (V 2.41) and Short Names are used for STS data elements that CCMRP collects, but not for modified or Non-STS data elements.

1. **Field Name**: Medical Record Number
   Short Name: MedRecN
   Valid Values: Not Defined
   Data Type/Format: Text
   Field Length: 11
   Definition: Patient medical record number at the hospital where surgery was performed.

2. **Field Name**: Isolated CABG
   Short Name: isocabg
   Valid Values: Yes; No
   Data Type/Format: Text
   Field Length: 3
   Definition: When any of the procedures listed in this Subsection is performed concurrently with the coronary artery bypass surgery, the surgery will be considered non-isolated and the data element coded ‘No’. It is not possible to list all procedures because cases can be complex and clinical definitions are not always precise. When in doubt, the data abstractor should first seek an opinion from the responsible surgeon and then consult CCORP.

Section A

- Valve repairs or replacements
- Operations on structures adjacent to heart valves (papillary muscle, chordae tendineae, traebeculae carneae cordis, annuloplasty, infundibulectomy)
- Ventriculectomy
- Repair of atrial and ventricular septa, excluding closure of patent foramen ovale
- Excision of aneurysm of heart
- Head and neck, intracranial endarterectomy
- Other open heart surgeries, such as aortic arch repair, pulmonary endartectomy
- Endarterectomy of aorta
- Thoracic endarterectomy (endarterectomy on an artery outside the heart)
- Heart transplantation
- Repair of certain congenital cardiac anomalies, excluding closure of patent foramen ovale (e.g., tetralology of fallot, atrial septal defect (ASD), ventricular septal defect (VSD), valvular abnormality)
- Implantation of cardiomyostimulation system (Note: Refers to cardiomyoplasty systems only, not other heart-assist systems such as pacemakers or internal cardiac defibrillators (ICDs))
- Any aortic aneurysm repair (abdominal or thoracic)
- Aorta-subclavian-carotid bypass
- Aorta-renal bypass
- Aorta-iliac-femoral bypass
- Caval-pulmonary artery anastomosis
- Extracranial-intracranial (EC-IC) vascular bypass
- Coronary artery fistula
- Maze procedures, surgical or catheter
- Resection of a portion of the lung (e.g., excision of an emphysematous bleb, lobectomy or segmental resection of lung). Does not include simple biopsy of lung nodule in which surrounding lung is not resected or biopsy of a thoracic lymph node.
- Mastectomy for breast cancer (not simple breast biopsy)

If a procedure listed in this Subsection is performed concurrently with the coronary artery bypass surgery, the surgery will be considered an isolated CABG and the data element coded 'Yes', unless a procedure listed in subsection(a)(2)(C)(i) is performed during the same surgery. These particular procedures are listed because the Office has received frequent questions regarding their coding.

Section B

- Transmyocardial laser revascularization (TMR)
- Pericardiectomy and excision of lesions of heart
- Repair/restoration of the heart or pericardium
- Coronary endarterectomy
- Pacemakers
- Internal cardiac defibrillators (ICDs)
- Fem-fem cardiopulmonary bypass (a form of cardiopulmonary bypass that should not be confused with aortofemoral bypass surgery listed in Subsection (a)(2)(C)(i))

3. **Field Name**: Date of Surgery

Short Name: SurgDt
Valid Values: Between admission and computer system date
Data Type/Format: Date mm/dd/yyyy
Field Length: 10
Definition: Patient date of surgery for the CABG procedure.

4. **Field Name**: Date of Birth
   Short Name: DOB
   Valid Values: Before computer system date
   Data Type/Format: Date mm/dd/yyyy
   Field Length: 10
   Soft Edits (CCORP)[1]: Date of Birth must precede Date of Surgery.
   Source Code to detect odd values: Where DOB > SurgDt;
   Definition: Patient date of birth.

5. **Field Name**: Patient Age
   Short Name: Age
   Valid Values: Calculated
   Data Type/Format: Integer
   Field Length: 3
   Soft Edits (CCORP): Expected Patient Age is between 18 and 95 years.
   Source Code to detect out of range values:
   Where Age < 18 and Age is > 95;
   Definition: Patient age in years, at time of surgery. This should be calculated from the Date of Birth and the Date of Surgery, according to convention used in the USA (the number of birth date anniversaries reached by the date of surgery).

6. **Field Name**: Gender
   Short Name: Gender
   Valid Values: Male; Female
   Data Type/Format: Text
   Field Length: 6
   Definition: Patient gender.

7. **Field Name**: Race
   Short Name: Race
   Valid Values: Caucasian; Black; Hispanic; Asian; Native American; Other
   Data Type/Format: Text
   Field Length: 15
   Definition: Patient race or ethnicity.

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[1] Soft edits are range checks and relational data checks used to prompt the user when unusual values are entered in the CCORP data collection tool. They are 'soft' because they allow users to continue data entry without changing the value(s) that brings up the warning flag. These are many of the same data checks used to produce the CCMRP data quality reports (DQRs) sent to hospitals in which OSHPD requests corrections. **Many requests for corrections by OSHPD can be avoided by use of these soft edits**. Our experience with corrected data indicates that in most, but not all cases, soft edits are violated because of data entry errors. For example, in patients coded *Dialysis=Yes but creatinine >6.0*, 19 out of 21 (90%) CCMRP-reported errors during the 1999 data period were in fact data entry errors, later corrected by hospital staff. Incorporating soft data edits is not required by law, but it will reduce the number of CCORP requests for data corrections.

8. **Field Name**: Date of Discharge
   Short Name: DischDt
   Valid Values: Between surgery and computer system date
   Data Type/Format: Date mm/dd/yyyy
   Field Length: 10
   Definition: Patient date of discharge.

9. **Field Name**: Mort-DC Status (Discharge Status)
   Short Name: MtDCStat
   Valid Values: Alive; Dead
   Data Type/Format: Text
   Field Length: 5
   Definition: Patient status upon discharge from the hospitalization in which surgery occurred.

10. **Field Name**: Mort-Date (Date of Death)
    Short Name: MtDate
    Valid Values: Date of discharge or between date of discharge and computer system date
    Data Type/Format: Date mm/dd/yyyy
    Field Length: 10
    Soft Edits (CCORP): No Mortality – Date given, but Discharge Status (MtDCStat) entered as 'Dead'.
    Source Code to detect odd values: Where MtDate is blank or missing and MtDCStat = 'DEAD';
    Definition: Patient date of death.

11. **Field Name(s)**: Surgeon (Responsible Surgeon Name)
    Short Names: SurgLname; SurgFname; SurgMI
    Valid Values: Not Defined
    Data Type/Format: Text; Uppercase
    Field Length: Last= 25, First= 20, MI= 1 (3 separate fields)
    Definition: The responsible surgeon is the principal surgeon who performs the coronary artery bypass procedure. If a trainee performs this procedure, then the responsible surgeon is the physician responsible for supervising this procedure performed by the trainee. In situations in which the responsible surgeon cannot otherwise be determined, the responsible surgeon is the surgeon who bills for the coronary artery bypass procedure. **(Note: Commas are not allowed in any of these fields.)**

12. **Field Name**: Responsible Surgeon California License Number
    Short Name: surglicnum
    Valid Values: Not Defined
    Data Type/Format: Text
    Field Length: 10
    Definition: California physician license number of responsible surgeon, assigned by the Medical Board of California of the Department of Consumer Affairs.

13. **Field Name**: Height (cm)
    Short Name: HeightCm

Valid Values: 20 – 251 cm
Data Type/Format: Real number 3.2 digits (e.g. 999.99)
Field Length: 6
Soft Edits (CCORP): (Male) Height outside expected 135 – 204 cm range.
(Female) Height outside expected 135 – 191 cm range.
Source code to detect odd values:
Where ((HeightCm > 191 and Gender = 'Female')
or (HeightCm > 204 and Gender = 'Male')
or (HeightCm < 135 and Gender = either 'Female' or 'Male'));
Definition: Height of the patient in centimeters.

14. **Field Name**: Weight (kg)
Short Name: WeightKg
Valid Values: 10 – 250 kg
Data Type/Format: Real number 3.2 digits (e.g. 999.99)
Field Length: 6
Soft Edits (CCORP): (Male) Weight outside expected 40 – 182 kg range.
(Female) Weight outside expected 35 – 182 kg range.
Source code to detect out of range values:
Where ((WeightKg < 35 and Gender = 'Female') or
(WeightKg < 40 and Gender = 'Male') or
(WeightKg > 182 and Gender = either 'Female' or 'Male'));
Definition: Weight of the patient in kilograms.

15. **Field Name**: RF-Diabetes (Diabetes)
Short Name: Diabetes
Valid Values: Yes; No
Data Type/Format: Text
Field Length: 3
Definition: The patient has a history of diabetes, regardless of duration of disease or need for anti-diabetic agents.

16. **Field Name**: RF-Hypertension (Hypertension)
Short Name: Hypertn
Valid Values: Yes; No
Data Type/Format: Text
Field Length: 3
Definition: The patient has a diagnosis of hypertension, documented by one of the following:
    - Documented history of hypertension diagnosed and treated with medication, diet and/or exercise.
    - Blood pressure > 140 systolic or > 90 diastolic on at least 2 occasions.

    Currently on antihypertensive medication.

17. **Field Name**: RF-Periph Vasc Dis (Peripheral Vascular Disease)
Short Name: PVD
Valid Values: Yes; No
Data Type/Format: Text
Field Length: 3
Definition: The patient has a history at any time prior to surgery of Peripheral Vascular Disease, as indicated by claudication either with exertion or rest; amputation for arterial insufficiency; aorto-iliac occlusive disease reconstruction;

peripheral vascular bypass surgery, angioplasty, or stent; documented abdominal aortic aneurysm (AAA), AAA repair, or stent; positive non-invasive testing documented. Excludes Cerebrovascular Disease.

18. **Field Name**: RF-Cerebrovascular Dis (Cerebrovascular Disease)
    Short Name: CVD
    Valid Values: Yes; No
    Data Type/Format: Text
    Field Length: 3
    Definition: The patient has a history at any time prior to surgery of Cerebrovascular Disease, documented by any one of the following: unresponsive coma > 24 hours; cerebrovascular accident (CVA) (symptoms > 72 hours after onset); reversible ischemic neurological deficit (RIND) (recovery within 72 hours of onset); transient ischemic attack (TIA) (recovery within 24 hours of onset); non-invasive carotid test with > 75% occlusion; or prior carotid surgery.

19. **Field Name**: RF-CVA (Cerebrovascular Accident)
    Short Name: CVA
    Valid Values: Yes; No
    Data Type/Format: Text
    Field Length: 3
    Soft Edits (CCORP): Cerebrovascular Accident Indicated, but No Cerebrovascular Accident Timing Given
    Source code to detect odd values: Where CVA = 'Yes' and CVAWhen = 'Missing';
    Definition: Has a history, at any time prior to surgery, of a central neurologic deficit persisting more than 72 hours. (i.e. extremity weakness or loss of motion, loss of consciousness, loss of speech, field cuts). Chart documentation of a prior diagnosis of CVA or stroke is sufficient.

20. **Field Name**: RF-CVA-When (Cerebrovascular Accident Timing)
    Short Name: CVAWhen
    Valid Values: <=2 weeks; >2 weeks
    Data Type/Format: Text
    Field Length: 9
    Soft Edits (CCORP): No Cerebrovascular Accident Indicated, but Cerebrovascular Accident Timing Given
    Source code to detect odd values: Where CVA = 'No' or CVA = 'Missing' and CVAWhen = '<=2 weeks' or CVAWhen = '>2 weeks';
    Definition: Events occurring within two weeks of the surgical procedure are considered recent (<=2 weeks); all others are considered remote (>2 weeks).

21. **Field Name**: RF-Chronic Lung Dis (Chronic Lung Disease)
    Short Name: ChrLungD
    Valid Values: No; Mild; Moderate; Severe
    Data Type/Format: Text
    Field Length: 8
    Definition: Specify if the patient has chronic lung disease, and the severity level according to the following classification:
    - No: No chronic lung disease present.
    - Mild: Forced expiratory volume in one second (FEV1) 60% to 75% of predicted, and/or on chronic inhaled or oral bronchodilator therapy.

- Moderate: FEV1 50-59% of predicted, and/or on chronic steroid therapy aimed at lung disease.
- Severe: FEV1 <50% predicted, and/or room air partial pressure of oxygen (pO2) < 60 or room air partial pressure of carbon dioxide (pCO2) > 50.

22. **Field Name**: RF-Immunosuppressive Rx (Immunosuppressive Treatment)
    Short Name: ImmSupp
    Valid Values: Yes; No
    Data Type/Format: Text
    Field Length: 3
    Definition: Patient has used any form of immunosuppressive therapy (i.e., systemic steroid therapy) within 30 days preceding the operative procedure. Does not include topical applications and inhalers.

23. **Field Name**: Hepatic Failure
    Short Name: hepafail
    Valid Values: Yes; No
    Data Type/Format: Text
    Field Length: 3
    Definition: The patient has cirrhosis, hepatic failure, acute hepatitis or “shock liver” and has a bilirubin greater than 2mg/dl and a serum albumin less than 3.5 grams/dl.

24. **Field Name**: RF-Renal Fail-Dialysis (Dialysis)
    Short Name: Dialysis
    Valid Values: Yes; No
    Data Type/Format: Text
    Field Length: 3
    Soft Edits (CCORP): When creatinine level >6 mg/dl, dialysis generally coded Yes.
    Source code to detect odd values: Where CreatLst > 6 and Dialysis = “No” or Dialysis= “Missing”;
    Definition: The patient is on dialysis preoperatively.

25. **Field Name**: RF-Last Creat Lvl (Last Creatinine Level Preop (mg/dl))
    Short Name: CreatLst
    Valid Values: 0.1 – 30
    Data Type/Format: Real number 2.1 digits (e.g. 99.9)
    Field Length: 3
    Soft Edits (CCORP): Creatinine outside expected 0.4 to 14.9 mg/dl range.
    Source code to detect odd values: Where (CreatLst ≥15) or (CreatLst > 0.1 and CreatLst < 0.40));
    Definition: The most recent creatinine level prior to day of surgery. A creatinine level should be collected on all patients for consistency, even if they have no prior history.

26. **Field Name**: Left Main Disease (% stenosis)
    Short Name: lmstenpct
    Valid Values: 0 - 100
    Data Type/Format: Integer
    Field Length: 3
    Hard Edits (CCORP): Left Main Disease cannot be <0 or >100
    Definition: Percentage of compromise of vessel diameter in any angiographic view.

27. **Field Name**: Num Dis Vessels (Number of Diseased Coronary Vessels)
    Short Name: NumDisV
    Valid Values: None; One; Two; Three
    Data Type/Format: Text
    Field Length: 5
    Soft Edits (CCORP): Number of Diseased Coronary Vessels must be ≥ 2 if Left Main Disease is > 50%
    Source code to detect odd values:
    Where lmstenpct is < 50 and (NumDisV = '0' or NumDisV = '1');
    Definition: The number of major coronary vessel systems (Left anterior descending (LAD) system, Circumflex system, and/or Right system) with >50% narrowing in any angiographic view. NOTE: Left main disease (>50%) is counted as TWO vessels (LAD and Circumflex). For example, left main and right coronary artery (RCA) would count as three total.

28. **Field Name**: VD-Insuff-Mitral (Mitral Insufficiency)
    Short Name: VDInsufM
    Valid Values: None; Trivial; Mild; Moderate; Severe
    Data Type/Format: Text
    Field Length: 8
    Definition: Indicate if there is evidence of mitral valve regurgitation and if so, the severity level.

29. **Field Name:** Hemo Data-EF (Ejection Fraction (%))
    Short Name: HDEF
    Valid Values: 5 - 90
    Data Type/Format: Integer
    Field Length: 2
    Soft Edits (CCORP): 1) Ejection Fraction outside expected 10 to 90 percent range. 2) Ejection Fraction Given, but No Method of Measurement Listed
    Source code to detect odd values:
    1) Where HDEF > 90 or HDEF < 5);
    2) Where HDEF ≠ 'Missing' and HDEFMeth = 'Missing';
    Definition: The percentage of blood emptied from the ventricle at the end of the contraction. Use the most recent determination prior to intervention

30. **Field Name**: Hemo Data-EF Method (Ejection Fraction Method)
    Short Name: HDEFMeth
    Valid Values: LV Gram; Radionuclide; Estimate; ECHO
    Data Type/Format: Text
    Field Length: 12
    Soft Edits (CCORP): No Ejection Fraction Given, but Method of Measurement Listed
    Source code to detect odd values: Where HDEF = 'Missing' and HDEFMeth = 'LV Gram' or HDEFMeth = 'Radionuclide' or HDEFMeth = 'Estimate' or HDEFMeth = 'ECHO';
    Definition: Method of obtaining ejection fraction measurement information:
    - LV Gram: Left Ventriculogram.
    - Radionuclide: MUGA Scan.
    - Estimate: From other calculations, based upon available clinical data.

- ECHO: Echocardiogram.

31. **Field Name**: MI (Myocardial Infarction)
Short Name: MI
Valid Values: Yes; No
Data Type/Format: Text
Field Length: 3
Soft Edits (CCORP): Myocardial Infarction Indicated but No Myocardial Infarction Timing Given
Source code to detect odd values: MI = 'Yes' and MIWhen = 'Missing';
Definition: Refers to any myocardial infarction (MI) in the past. For MIs prior to the current hospitalization for which detailed records are not available, chart documentation in which a clinician caring for the patient diagnosed an MI is sufficient. For MIs during the current hospitalization for which detailed records are available, conditions A and B below must all be met:
A) The patient must have been diagnosed with a myocardial infarction (ST elevation or non ST elevation) by a clinician caring for patient.
B) At least 1 of the 3 following biochemical indicators for detecting myocardial necrosis must be present:
    1) Troponin T or I:
        a. Maximal concentration of troponin T or I exceeding the MI diagnostic limit (99^{th} percentile of the values for a reference control group, as defined in section C) on at least one occasion during the first 24 hours after the index clinical event.
    2) CK-MB:
        a. Maximal value of CK-MB more than two times the upper limit of normal on at least one occasion during the first 24 hours after the index clinical event.
        b. Maximal value of CK-MB, preferable CK-MB mass, exceeding 99^{th} percentile of the values for a reference control group, as defined in section C, on two successive samples during the first 24 hours after the index clinical event.
    3) Total CK:
        a. In the absence of availability of a troponin or CK-MB assay, total CK more than two times the upper limit of normal (99^{th} percentile of the values for a reference control group, as defined in section C), or the B fraction of CK may be employed, but these last two biomarkers are considerably less satisfactory than CK-MB.
C) Reference control values (MI diagnostic limit and upper limit of normal):
    1) Reference values must be determined in each laboratory by studies using specific assays with appropriate quality control, as reported in peer-reviewed journals. Acceptable imprecision (coefficient of variation) at the 99^{th} percentile for each assay should be defined as less than or equal to 10 percent. Each individual laboratory should confirm the range of reference values in their specific setting.

32. **Field Name**: MI-When (Myocardial Infarction Timing)
Short Name: MIWhen
Valid Values: <=6 hours; >6 but <24 hours; 1-7 days; 8-21days; >21 days.
Data Type/Format: Text
Field Length: 16

Soft Edits (CCORP): No Myocardial Infarction Indicated but Myocardial Infarction Timing Given
Source code to detect odd values: MI = 'No' or MI = 'Missing' and MIWhen = '<=6 hours' or MIWhen = '>6 but <24 hours' or MIWhen = '1-7 days' or MIWhen = '8-21days' or MIWhen = '>21 days';
Definition: Time period between the last documented myocardial infarction and the CABG surgery.

33. **Field Name**: Arrhythmia
Short Name: Arrhyth
Valid Values: Yes; No
Data Type/Format: Text
Field Length: 3
Soft Edits (CCORP): Arrhythmia Indicated but No Arrhythmia Type Given
Source code to detect odd values: Arrhyth = 'Yes' and ArrhyTyp = 'Missing';
Definition: A preoperative arrhythmia present within two weeks prior to the procedure, by clinical documentation of any one of the following:
    - Atrial fibrillation/flutter requiring medication.
    - Heart block.
    - Sustained Ventricular Tachycardia or Ventricular Fibrillation requiring cardioversion and/or intravenous amiodarone.

34. **Field Name**: Arrhythmia Type
Short Name: ArrhyTyp
Valid Values: Sust VT/VF; Heart Block; Afib/Flutter
Data Type/Format: Text
Field Length: 12
Soft Edits (CCORP): No Arrhythmia Indicated but Arrhythmia Type Given
Source code to detect odd values: Arrhyth = 'No' or Arrhyth = 'Missing' and ArrhyTyp = 'Sust VT/VF' or ArrhyTyp = 'Heart Block' or ArrhyTyp = 'Afib/Flutter';
Definition: The type of arrhythmia present within two weeks prior to the procedure is:
    - Sustained Ventricular Tachycardia or Ventricular Fibrillation requiring cardioversion and/or intravenous amiodarone.
    - Heart Block.
    - Atrial fibrillation/flutter requiring medication.

35. **Field Name**: Cardiogenic Shock
Short Name: CarShock
Valid Values: Yes; No
Data Type/Format: Text
Field Length: 3
Definition: The patient, at the time of procedure, is in a clinical state of hypoperfusion according to either of the following criteria:
    - Systolic blood pressure (BP) < 80 and/or Cardiac Index (CI) < 1.8 despite maximal treatment.
    - Intravenous inotropes and/or intra-aortic balloon pump (IABP) necessary to maintain Systolic BP > 80 and/or CI > 1.8.

36. **Field Name**: Angina
Short Name: Angina

Valid Values: Yes; No
Data Type/Format: Text
Field Length: 3
Soft Edits (CCORP): Angina Indicated but No Angina Type Given
Source code to detect odd values: Angina = 'Yes' and (AngType = 'No' or AngType = 'Missing');
Definition: The patient has ever had angina pectoris.

37. **Field Name**: Angina-Type
Short Name: AngType
Valid Values: Stable; Unstable
Data Type/Format: Text
Field Length: 8
Soft Edits (CCORP): No Angina Indicated but Angina Type Given
Source code to detect odd values: Angina = 'No' or Angina = 'Missing' and AngType = 'Stable' or AngType = 'Unstable';
Definition: The type of angina present within 24 hours prior to CABG surgery is:
- Stable: Angina not meeting unstable criteria below.
- Unstable: Requires continuous hospitalization from the episode until surgery and one of the following:
  1. Angina at rest.
  2. New onset angina in past 2 months of at least Canadian Cardiovascular Society (CCS) Class III.
  3. Increasing angina in past 2 months - angina that has become more frequent, longer in duration, or lower in threshold; and increased by greater than or equal to 1 CCS class to at least CCS Class III severity.

38. **Field Name**: Classification-CCS
Short Name: ClassCCS
Valid Values: 0; I; II; III; IV
Data Type/Format: Text
Field Length: 3
Definition: Canadian Cardiovascular Society (CCS) Classification. This classification represents level of functional status related to frequency and intensity of angina. The CCS may not be the same as the NYHA classification for the same evaluation time period. Code the highest class leading to episode of hospitalization and/or intervention:
- 0= No angina.
- I = Ordinary physical activity, such as walking or climbing the stairs does not cause angina. Angina may occur with strenuous, rapid or prolonged exertion at work or recreation.
- II = There is a slight limitation of ordinary activity. Angina may occur with moderate activity such as walking or climbing stairs rapidly, walking uphill, walking or stair climbing after meals or in the cold, in the wind, or under emotional stress, or walking more than two blocks on the level, and climbing more than one flight of stairs at normal pace under normal conditions.
- III = There is marked limitation of ordinary physical activity. Angina may occur after walking one or two blocks on the level or climbing one flight of stairs under normal conditions at a normal pace.
- IV = There is inability to carry on any physical activity without discomfort; angina may be present at rest.

39. **Field Name**: Congestive Heart Failure
Short Name: CHF
Valid Values: Yes; No
Data Type/Format: Text
Field Length: 3
Definition: The patient had symptoms that occurred within 2 weeks prior to surgery. This does not include patients with chronic or stable non-symptomatic compensated congestive heart failure (CHF). The patient has one or more of the following:
    - Paroxysmal nocturnal dyspnea (PND).
    - Dyspnea on exertion (DOE) due to heart failure.
    - Chest X-Ray (CXR) showing pulmonary congestion.
    - Pedal edema or dyspnea and receiving diuretics or digoxin.

40. **Field Name**: Classification-NYHA
Short Name: ClassNYH
Valid Values: I; II; III; IV
Data Type/Format: Text
Field Length: 3
Definition: New York Heart Association (NYHA) Classification represents the overall functional status of the patient in relationship to both congestive heart failure and angina. The NYHA may not be the same as the CCS classification for the same evaluation period. Code the highest level leading to episode of hospitalization and/or procedure.
    - I = Patients with cardiac disease but without resulting limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitation, dyspnea or anginal pain.
    - II = Patients with cardiac disease resulting in slight limitation of physical activity. They are comfortable at rest. Ordinary physical activity results in fatigue, palpitations, dyspnea or anginal pain.
    - III = Patients with cardiac disease resulting in marked limitation of physical activity. They are comfortable at rest. Less than ordinary physical activity results in fatigue, palpitations, dyspnea, or anginal pain.
    - IV = Patients with cardiac disease resulting in inability to carry on any physical activity without discomfort. Symptoms of cardiac insufficiency or of the anginal syndrome may be present even at rest. If any physical activity is undertaken, discomfort is increased.

41. **Field Name**: Prior Card Op Req Bypass-# (Number of Prior Cardiac Operations Requiring Cardiopulmonary Bypass)
Short Name: PrCBNum
Valid Values: 0 - 9
Data Type/Format: Integer length 1
Field Length: 1
Soft Edits (CCORP): 4 or fewer prior Cardiac Operations Requiring Cardiopulmonary Bypass expected.
Source code to detect odd values:
Where PrCBNum > 4.
Definition: Prior to this operation, the number of cardiac surgical operations performed on this patient utilizing cardiopulmonary bypass.

42. **Field Name**: Prior Card Op No Bypass-# (Number of Prior Cardiac Operations Without Cardiopulmonary Bypass)
Short Name: PrCNNum
Valid Values: 0 - 9
Data Type/Format: Integer length 1
Field Length: 1
Soft Edits (CCORP): 4 or fewer prior Cardiac Operations Without Cardiopulmonary Bypass expected.
Source code to detect odd values:
Where PrCNNum > 4.
Definition: Prior to this operation, the number of cardiac surgical operations performed on this patient without cardiopulmonary bypass.

43. **Field Name**: Status (Status of the Procedure)
Short Name: Status
Valid Values: Emergent/Salvage; Emergent; Urgent; Elective
Data Type/Format: Text
Field Length: 16
Definition: The status that best describes the clinical status of the patient at the time of surgery.
    - Emergent/Salvage: The patient is undergoing cardiopulmonary resuscitation en route to the operating room or prior to anesthesia induction.
    - Emergent: The patient's clinical status includes any of the following:
        - Ischemic dysfunction (any of the following):
            - Ongoing ischemia including rest angina despite maximal medical therapy (medical and/or intra-aortic balloon pump (IABP));
            - Acute evolving Myocardial Infarction within 24 hours before surgery; or
            - Pulmonary edema requiring intubation.
        - Mechanical dysfunction (either of the following):
            - Shock with circulatory support; or
            - Shock without circulatory support.
    - Urgent: ALL of the following conditions are met:
        - Not elective status
        - Not emergent status
        - Procedure required during same hospitalization in order to minimize chance of further clinical deterioration.
        - Worsening, sudden chest pain; congestive heart failure (CHF); acute myocardial infarction (AMI); coronary anatomy; IABP; unstable angina (USA) with intravenous nitroglycerin; rest angina, valve dysfunction; or aortic dissection.
    - Elective: The patient's status has been stable in the days or weeks prior to the operation. The procedure could be deferred without increased risk of compromised cardiac outcome.

44. **Field Name**: Cardiopulmonary Bypass Used
Short Name: CPBUsed
Valid Values: Yes; No
Data Type/Format: Text
Field Length: 3
Definition: Use of cardiopulmonary bypass (CPB) at any time during the procedure.

45. **Field Name**: Conversion to CPB (Conversion to Cardiopulmonary Bypass)
    Short Name: ConvCPB
    Valid Values: Yes; No
    Data Type/Format: Text
    Field Length: 3
    Soft Edits (CCORP): Conversion to CPB cannot be 'Yes' if CPB Used is 'No'
    Source code to detect odd values: Where ConvCPB = 'Yes' and CPBUsed = 'No';
    Definition: The patient needed to be placed on cardiopulmonary bypass (CPB) after the off-pump procedure was attempted.

46. **Field Name**: Primary Incision
    Short Name: PrimInc
    Valid Values: Full Sternotomy; Partial Sternotomy; Transverse Sternotomy; Right Vertical Parasternal; Left Vertical Parasternal; Right Anterior Thoracotomy; Left Anterior Thoracotomy; Posterolateral Thoracotomy; Xiphoid; Epigastric; Subcostal
    Data Type/Format: Text
    Field Length: 26
    Definition: The primary incision used as the initial intention for treatment:
    - Full Sternotomy
    - Partial Sternotomy
    - Transverse Sternotomy
    - Right Vertical Parasternal
    - Left Vertical Parasternal
    - Right Anterior Thoracotomy
    - Left Anterior Thoracotomy
    - Posterolateral Thoracotomy
    - Xiphoid
    - Epigastric
    - Subcostal

47. **Field Name**: Cardioplegia
    Short Name: Cplegia
    Valid Values: Yes; No
    Data Type/Format: Text
    Field Length: 3
    Definition: Cardioplegia was used.

48. **Field Name**: IMA Artery Used (Internal Mammary Artery(ies) Used as Grafts)
    Short Name: IMAArtUs
    Valid Values: Left IMA; Right IMA; Both IMAs; No IMA
    Data Type/Format: Text
    Field Length: 9
    Definition: Internal Mammary Artery(ies) (IMA) used for grafts, if any.
    - Left IMA
    - Right IMA
    - Both IMAs
    - No IMA

49. **Field Name**: Prior PCI (Prior PCI including Balloon and/or Atherectomy and/or Stent)
    Short Name: PCI
    Valid Values: Yes; No
    Data Type/Format: Text
    Field Length: 3
    Soft Edits (CCORP): Prior PCI including Balloon and/or Atherectomy and/or Stent Indicated but No Interval from prior PTCA/Atherectomy/Stent to Surgery Given
    Source code to detect odd values: PCI = 'Yes' and PCIIntv = 'Missing'
    Definition: Percutaneous coronary-intervention (PCI) was done at any time prior to this surgical procedure (which may include during the current admission). PCI includes percutaneous transluminal coronary angioplasty (PTCA), intracoronary fibrinolysis without PTCA, laser recanalization, stent implantation, rheolysis with angiojet, brachytherapy, and other catheter-based percutaneous recanalization techniques.

50. **Field Name**: Prior PCI Interval (Interval from prior PCI to Surgery)
    Short Name: PCIIntv
    Valid Values: <= 6 hours; > 6 hours
    Data Type/Format: Text
    Field Length: 10
    Soft Edits (CCORP): No Prior PCI including Balloon and/or Atherectomy and/or Stent Indicated but Interval from Prior PCI to Surgery Given
    Source code to detect odd values: PCI = 'No' or PCI = 'Missing' and PCIIntv = '<= 6 hours' or PCIIntv = '> 6 hours';
    Definition: The time between prior PCI and surgical repair of coronary occlusion:
    - <= 6 hours
    - > 6 hours

51. **Field Name**: Facility Identification Number
    Short Name: hospitalid
    Valid Values: Not Defined
    Data Type/Format: Text
    Field Length: 6
    Definition: The six-digit facility identification number assigned by the California Office of Statewide Health Planning and Development.

3) CCORP Field Export Order for Data Submissions

Field Short Names for data columns appear bolded in parenthesis and should appear on the first line of the comma-delimited ASCII file.

1) Medical Record Number **(MedRecN)**
2) Isolated CABG **(isocabg)**
3) Date of Surgery **(SurgDt)**
4) Date of Birth **(DOB)**
5) Patient Age **(Age)**
6) Gender **(Gender)**
7) Race **(Race)**
8) Date of Discharge **(DischDt)**
9) Discharge Status **(MtDCStat)**
10) Date of Death **(MtDate)**
11a) Surgeon Last Name **(SurgLname)**
11b) Surgeon First Name **(SurgFname)**
11c) Surgeon Middle Initial **(SurgMI)**
12) Responsible Surgeon CA License Number **(surglicnum)**
13) Height (cm) **(HeightCm)**
14) Weight (kg) **(WeightKg)**
15) Diabetes **(Diabetes)**
16) Hypertension **(Hypertn)**
17) Peripheral Vascular Disease **(PVD)**
18) Cerebrovascular Disease **(CVD)**
19) Cerebrovascular Accident **(CVA)**
20) Cerebrovascular Accident Timing **(CVAWhen)**
21) Chronic Lung Disease **(ChrLungD)**
22) Immunosuppressive Treatment **(ImmSupp)**
23) Hepatic Failure **(hepafail)**
24) Dialysis **(Dialysis)**
25) Last Creatinine Level Preop (mg/dl) **(CreatLst)**
26) Left Main Disease (% Stenosis) **(lmstenpct)**
27) Number of Diseased Coronary Vessels **(NumDisV)**
28) Mitral Insufficiency **(VDInsufM)**
29) Ejection Fraction (%) **(HDEF)**
30) Ejection Fraction Method **(HDEFMeth)**
31) Myocardial Infarction **(MI)**
32) Myocardial Infarction Timing **(MIWhen)**
33) Arrhythmia **(Arrhyth)**
34) Arrhythmia Type **(ArrhyTyp)**
35) Cardiogenic Shock **(CarShock)**
36) Angina **(Angina)**
37) Angina Type **(AngType)**
38) CCS Classification **(ClassCCS)**
39) Congestive Heart Failure **(CHF)**
40) NYHA Classification **(ClassNYH)**
41) Number of Prior Cardiac Operations Requiring Cardiopulmonary Bypass **(PrCBNum)**
42) Number of Prior Cardiac Operations Without Cardiopulmonary Bypass **(PrCNNum)**

43) Status of the Procedure **(Status)**
44) Cardiopulmonary Bypass Used **(CPBUsed)**
45) Conversion to Cardiopulmonary Bypass **(ConvCPB)**
46) Primary Incision **(PrimInc)**
47) Cardioplegia **(Cplegia)**
48) Internal Mammary Artery(ies) Used as Grafts **(IMAArtUs)**
49) Prior PCI **(PCI)**
50) Interval from Prior PCI to Surgery **(PCIIntv)**
51) Facility Identification Number **(hospitalid)**

4. Surgeon Certification of Data

The CCORP regulations require that each surgeon identified as the "responsible surgeon" (see data element definition) in a semiannual hospital report certify to the accuracy of the reported data for his or her CABG surgeries. To certify to their data, the surgeons must complete and sign a CCORP Surgeon Certification Form. **The regulations require that all Surgeon Certification Forms be provided to CCORP at the same time as the data submission by the hospital.**

A draft of the Surgeon Certification Form occurs on the next page.

CALIFORNIA CABG OUTCOMES REPORTING PROGRAM
Surgeon Certification Form

OSH-CCORP 415 (New 10/02)

Healthcare Quality and Analysis Division
818 K Street, Room 200
Sacramento, California 95814
(916) 322-9700 FAX (916) 322-9718

Surgeon's name: _____ _____ _____
(First) *(Middle Initial)I* *(Last)*

California Physician License Number: | | | | | | |

Hospital name: _____

Facility Identification Number: | | | | | | |

Report period: *From:* | | | | | | *To:* | | | | | |
(Month) *(Day)* *(Year)* *(Month)* *(Day)* *(Year)*

Total records: _____

Statement of Certification

I, _____, affirm that the cases assigned to me in this
(Name of Surgeon)
California CABG Outcomes Reporting Program report are accurate, and that I have reviewed these data for accuracy and completeness. I also understand that these data, after any corrections or revisions required by the Office of Statewide Health Planning and Development, will be used to compute my risk-adjusted mortality rate for coronary artery bypass graft surgery, and that the Office of Statewide Health Planning and Development will assign data elements with invalid or missing values the lowest risk value as observed in the most current risk-adjustment model for predicting mortality.

Name: _____

Signature: _____ Dated: _____

Address: _____

Telephone: _____

E-mail: _____